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ABSTRACT

Parents of delinquents often display unconstructive behavioral patterns. The effects of behavior contracting with juvenile delinquents in response to these patterns was examined. Delinquent youth (N=72) were randomly assigned to one of three conditions: (1) controls, receiving normal court treatment; (2) a Family Contracting (FC) group, diverted from the court system and working for 18 weeks with an undergraduate trained to use behavioral contracting with the youth's family; and (3) an Advocacy/Contracting (AC) group, working with an undergraduate trained in child advocacy as well as in behavioral contracting. Data from juvenile court files and police records revealed that court petitions, seriousness of petitions, police contacts, seriousness of contacts, and self-reports of delinquency all showed a drop in frequency over time. The AC group showed the greatest drops. Although the AC condition was superior to the FC condition, diverting the youth from formal court involvement using either intervention resulted in fewer youth incarcerations. Interviews with delinquents, parents, and undergraduate volunteers conducted throughout the intervention revealed that the volunteers in both conditions adhered strongly to the contracting model. (NRB)

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An Experimental Examination of Behavioral

Contracting with Delinquent Youth

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An Experimental Examination of Behavioral Contracting with Delinquent Youth

The intent of this paper will be to experimentally assess the effects of behavioral contracting with juvenile delinquents. Behavioral interventions with delinquents have produced positive results, but several reviews have noted serious methodological shortcomings (Davidson & Seidman, 1974; Braukmann, & Fixsen, 1975; Neitzel, Winett, MacDonald, & Davidson, 1977). This paper will present preliminary results of research aimed at providing longitudinal experimental data relevant to differential effectiveness of various intervention alternatives. Specific issues addressed will be: 1) to what extent can undergraduates be trained to execute behavioral contracting methods between delinquent youth and their parents, and 2) what is the differential recidivism of youth handled in this manner as compared to: (a) youth working with students trained in a broad based style of intervention, and (b) youth given normal court treatment.

Background

It has been noted that the parents of delinquents display unconstructive behavioral patterns such as unspecified and inconsistent contingencies, the use of aversive controls, attention to undesirable behavior, and a lack of attention to positive behaviors (Alexander & Parsons, 1973). The development and use of behavioral contracts with delinquents in response to these patterns has been discussed by a number of authors (Stuart, 1971; DeRisi & Butz, 1975; Tharp & Wetzel, 1969; Stuart, Jayaratne & Tripodi, 1976).

The contracting process used in this research began with an assessment of the contingencies operating between the youth and his/her parents. Each party was asked to express in behavioral terms the changes he/she would like to see in the other. Based on this information, a contract was written in order to specify the behavioral contingencies by which privileges and responsibilities were

exchanged. A monitoring system was designed to assess compliance with the contract. Renegotiation occurred as needed.

Method

Context of the Research

The intervention and research issues raised above were addressed in a study taking place within the context of a five year research project funded by NIMH. A local county juvenile court serving a medium size midwestern city served as the referral source of delinquent youth.

Youth Referred

Seventy-two youth were involved in the current research during 1978 and 1979. The youth averaged 14.5 years of age. They were two-thirds white and two-thirds male. All socio-economic strata were represented; however, lower and middle income groups were over represented. Petitions on referred youth included those for minor and serious misdemeanors as well as minor felonies. The youth were randomly assigned to intervention conditions.

Nonprofessional Volunteers

Twenty-four male and twenty-four female undergraduates at Michigan State University served as project change agents. The volunteers were, for the most part, social science majors in psychology or criminal justice. Students were committed to a three-term (year-long) involvement in the project and received course credit for their participation. Students were randomly selected from a large pool of those interested in project involvement and they were randomly assigned to intervention conditions.

Procedures

Delinquent youth participating in the project were randomly assigned to one of two intervention conditions or a treatment-as-usual control. Students in the first experimental condition, the Family Contracting group, received training and supervision in the use of behavioral contracting techniques and were instructed

to restrict intervention to family related settings (Stuart, 1971). Students in the second intervention condition, the Advocacy/Contracting condition, received training and supervision in the use of child advocacy (Davidson & Rapp, 1976) as well as in behavioral contracting techniques (Stuart, 1971). Students in the second condition divided their intervention among a variety of social settings including the family, the school, friends and employment. Thus the intervention covered a wide spectrum of the youth's life at the expense of providing less intensive intervention within the family setting.

All student volunteers received eight weeks of structured training during the first academic term of their involvement in the project. Second and third terms were spent in direct provision of services to the assigned youth. Volunteers were instructed to spend a minimum of six to eight hours per week working on their case. The actual intervention duration was eighteen weeks. This duration was chosen because it was felt that the length was sufficient to establish clear goals and make progress toward accomplishing those goals. In addition, it was felt that eighteen weeks was not so long as to establish unnecessary dependencies. The control youth received court treatment as usual. This typically included a formal or informal probationary period supervised by court personnel.

The students met in classes of six persons with two graduate student trainer/supervisors. Classes met weekly for two and a half hours, allowing ample time for individualized instruction and close supervision of intervention strategies.

Outcome Measures

Pre- and post-archival data were collected directly from the county juvenile court files as well as from the county sheriff's office and several local police departments. The number of petitions filed on each youth and the seriousness of the offenses (using a modified version of the Sellin & Wolfgang, 1964 method) for which the youth was petitioned were recorded from the court data set. The duration each youth was incarcerated (in jail, the local juvenile home or some

other institutional setting) was also recorded from the court files. The frequency of contacts and their seriousness were recorded from the county sheriff and several local police departments. In addition, a scale assessing the self-reported incidence of common delinquent acts was administered at four points in time during the intervention interval (see "Process Measures" below). The reliability and validity properties of this scale had been determined previously (Blakely, Kushler, Parisian & Davidson, 1979). School status, grade point average and attendance records were also collected for each youth. All outcome measures were collected by individuals blind to experimental condition.

Process Measures

Each delinquent youth, one of his/her parents, and the undergraduate change agent were interviewed at the referral point, and six, 12 and 18 weeks into the intervention period. Several process scales, developed through a rational-empirical method (Jackson, 1971) were utilized with this data set. The reliability and validity properties of these scales have been discussed previously (Davidson, 1976; Kantrowitz, Davidson, Blakely & Kushler, 1978). The scales included: (1) life domain scales which were designed to assess each youth's behavior on a daily basis and its change across time and (2) intervention scales (administered only to those in the experimental conditions) which were intended to describe and monitor the intervention process across time and provide a measure of the volunteers' adherence to the intervention model.

Analysis

The outcome data (court, police, and school) was subjected to a repeated-measures analysis of variance with six time points. The one year pre-data was divided into four quarters and the intervention interval was divided into two equivalent time intervals. The life domain process scales and the self-report scale were also analyzed using repeated-measures analysis of variance across four time periods. The intervention scales were repeated across three time points.

The results were further broken down using Scheffé comparisons.

Results

Outcome Data

All the outcome data yielded similar results. The court petitions, seriousness of petitions, police contacts, seriousness of contacts and self-reported estimates of delinquent behavior all showed strong overall main effects across time (a drop in frequency over time). Figure 1 illustrates the pattern of these results for police contact rates pre- and post-intervention. Though the condition main effect and the interaction effect of condition by time were not significant (see Table 1), Scheffé comparisons of change across time yielded a finding worthy of note. The Advocacy/Contracting (A/C) group was the major contributor to the main effect for time ($F=3.83$, $p < .01$). The decreases in both the Family Contracting (FC) and Control (C) conditions were not significant.

As noted above, similar patterns emerged in the police seriousness variable, the court variables of petitions and seriousness and the self-report instrument. The overall time effect was significant in each case. The condition and interaction effects were not significant. However, the Advocacy/Contracting group consistently yielded the highest drops across time while the Family Contracting group never showed a significant drop and the Control condition occasionally showed a significant drop. Furthermore, the Advocacy/Contracting vs. Family Contracting comparison on the police seriousness variable at the post point showed the Family Contracting group to have more serious contacts (A/C vs. FC, $F=3.41$, $p < .05$).

The incarceration variable, on the other hand, yielded a significant condition comparison. A Scheffé comparison of the two combined experimental conditions with the Control condition at the post point, was significant, suggesting that the Controls became institutionalized more frequently than did the experimental youth (A/C + FC vs. C, $F=3.83$, $p < .05$).

The analysis of variance of the school variables also showed significant

main effects for time but no condition effects or interactions. The Scheffé comparisons revealed that the percentage of youth no longer attending school increased significantly for both the Family Contracting ($F=14.08$, $p < .01$) and Control conditions ($F=10.82$, $p < .01$) but not for the Advocacy/Contracting condition (see Table 2). Also, grade point average dropped significantly for the Family Contracting condition ($F=7.72$, $p < .01$) while remaining relatively stationary in the other conditions, and the absenteeism rate increased sharply in the Family Contracting group ($F=22.76$, $p < .01$).

One Life Domain scale is of particular interest to note at this point. The school involvement scale assessed the extent to which the youth is involved in normal school activities. The data in this case suggested that those youth who did not have any additional contacts with the authorities (court petitions or police contacts) were more involved in school activities ($F=5.24$, $p < .03$).

Process Data

The intervention process scales were designed to monitor the intervention process and determine the extent of adherence to the intervention models. The results of several scales are worthy of brief note at this point. In particular, it is important to note that the scale assessing the amount of time the student volunteers invested in their cases showed no condition differences at any of the time intervals.

The scale assessing the extent of parental involvement in the intervention process showed main effects for condition with parents in the Family Contracting condition more involved than those in the Advocacy/Contracting condition ($F=5.61$, $p < .05$). A Scheffé comparison revealed an increase in parental involvement over time across all conditions ($F=4.50$, $p < .05$). In addition, the scale assessing contracting activities on the part of the volunteers showed main effects for both time ($F=8.86$, $p < .01$) and condition with the Family Contracting condition showing more contracting activities at all time periods ($F=4.63$, $p < .05$; see Figure 2).

On the other hand, the scale assessing the volunteers' advocacy activities yielded no significant findings. However, there was evidence that the Advocacy/Contracting volunteers intervened in a wider variety of settings on behalf of their youths than did the Family Contracting volunteers. For instance, the analysis of variance of the scale measuring interventions focused on changing the school setting showed a nearly significant main effect with volunteers in the Advocacy/Contracting condition intervening in this area more frequently than those in the Family Contracting condition ($F=3.99$, $p < .06$). Similarly, the scale assessing interventions focused on changing the youth within the school setting showed a significant condition by time interaction. The Advocacy/Contracting group increased over time ($F=11.89$, $p < .01$) while the Family Contracting group decreased, although not significantly (see Figure 3).

Further evidence of the Advocacy/Contracting groups' broader range of activities was found in the scale that measured intervention in the employment area. Results showed a significant condition ($F=3.72$, $p < .06$) main effect with the Advocacy/Contracting volunteers intervening more in this area than the Family Contracting volunteers.

The scale assessing interventions in the legal system showed no differential condition effects. Volunteers intervened in the legal system if their youth got in trouble with the authorities again; otherwise, they did not.

Discussion

Briefly summarizing the process findings, it should be apparent that the intended differences between the Family Contracting and the Advocacy/Contracting conditions did, in fact, exist. That is, the process results demonstrated differences in intervention activities between the two conditions that fit with the models. The Family Contracting group showed increased activities in the contacting and home change areas while the Advocacy/Contracting group showed more intervention in school, employment and other extra-familial settings.

In addition, the process results clearly indicate that the volunteers in both conditions demonstrated a strong adherence to the contracting model. For example, recall that the analysis of variance of the contracting scale revealed a main effect for time with the mean level of contracting procedures increasing substantially. This is consistent with expectations of the sequence of events in the contracting model. More specifically, the model calls for an initial assessment period of several weeks. During this period the volunteer determines the relationship between the youth and significant others in his environment, the youth's needs, and what reinforcers might be operable. This is followed by a negotiation phase leading to the final construction of the contract. At this point, the actual contract is put into effect and is monitored. The pattern of the extent of contracting activities across time coincides with the model precisely (see Figure 2). The first six week interval (time 1) showed minimal contracting activities. This period corresponds to the volunteers initial assessment period of getting to know the youth and his/her situation while gradually moving toward more specific contracting assessment strategies as the interval ends. The second six week interval (time 2) would then correspond to the period of greatest contracting activity with the actual negotiation and implementation taking place. This second time interval does in fact demonstrate the greatest occurrence of contracting activities. The third six week interval (time 3) shows the desired gradual drop off of contracting intervention as the process moves into the monitoring stages. At this time, the cases are moving toward termination and the emphasis shifts gradually toward placing the responsibility for any contracting activities back with the family as the volunteer withdraws. This curve is apparent within both of the experimental conditions although the Family Contracting group shows a higher level of activity at all time periods.

In regard to the outcome findings, it should be remembered that all of the youths involved in this research had an extremely high incidence of court, police

and self-report delinquent activities immediately prior to their referral to the project. Due to this unique feature of these repeated-measures data sets, condition effects on these outcome variables were not anticipated nor necessarily desired; the interaction effect is of prime concern. Though the overall interaction effect was not significant for any of these outcome variables, it did approach significance on several occasions and Scheffé comparisons did yield differential results across time. The Advocacy/Contracting condition consistently produced greater reductions in court and police contacts and in the corresponding seriousness weightings of those offenses than did the other conditions. The same was true of the self-report data set. In contrast, the Family Contracting condition only showed this drop on the court petitions variable while the Control group showed this drop to a lesser extent in just three of these outcome measures.

In interpreting these results, it is imperative to recall the differences between the conditions. Both experimental conditions provided training in the use of the contracting intervention strategy. However, the Family Contracting intervention model provided for an in-depth intervention in the family setting while the Advocacy/Contracting model provided for the inclusion of advocacy strategies as well as the unrestricted scope of allowing intervention in other settings. Given these results, one might be tempted to conclude that the use of contracting skills alone is insufficient to provide the needed impact in the lives of youth identified as delinquent by the juvenile courts. An alternative hypothesis is that the restriction of focusing these skills entirely within the family setting accounts for the relatively poor performance of the Family Contracting group, since it did not allow for contact with the other critical areas in the youth's environment (such as school or job settings).

More support for this latter hypothesis is evident when considering the School Outcome data which again showed the superiority of the Advocacy/Contracting condition. Furthermore, this result was also demonstrated by the intervention scales

assessing intervention in the school area. (This was not surprising, given that the Family Contracting condition was essentially restricted from operating in the school domain.) In all instances, school intervention was minimal in the Family Contracting group when compared to the Advocacy/Contracting condition. In light of the findings that suggest a negative relationship between positive school involvement on a regular basis and continued contacts with the official juvenile justice system it might be inferred that it is very important for change agents to target the school area of the youths' lives. If this is true, it would lend support to the hypothesis that the restricted range of the intervention model employed in the Family Contracting condition led to the observed differential outcome results.

It is also worth noting again at this point that, although the Advocacy/Contracting group demonstrated slightly higher scores on the advocacy scale than did the Family Contracting group, these differences were not significant. Since advocacy skills comprise the additional intervention tools that the Advocacy/Contracting group received in training, (beyond those received by the Family Contracting group) the fact that this scale does not reveal condition differences would cast doubt on the hypothesis that the observed differential outcome results are due to the greater variety of tools at the Advocacy/Contracting group's disposal. In fact, both conditions showed moderately high levels of advocacy activities throughout the intervention period. This suggests that a substantial amount of advocacy intervention occurs spontaneously and naturally, although some of the specific steps incorporated in the model do not occur. Hence, the critical variable involved in these results appears to be the range of intervention, not the specifics of the intervention model per se (contracting vs. contracting plus advocacy).

Conclusion

In summary, it appears that the contracting model can readily be taught to an undergraduate nonprofessional population and applied in a community setting

with delinquent youth and their families. Process measurement demonstrated strong evidence for adherence to the proposed contracting model by the trained volunteers. Although the overall condition effects were not significant, several Scheffé comparisons produced results suggesting the utility of both experimental conditions. However, the Advocacy/Contracting condition was clearly superior to the Family Contracting condition.

The process scales demonstrate that a great deal of contracting activity occurred in both experimental conditions. Nevertheless, it does appear that restricting the range of appropriate areas to apply the techniques is detrimental to the effectiveness of the model. Given the nature of this data set and the preliminary nature of these findings, it is not possible at this time to rule out advocacy activities as a necessary component in the more effective intervention model (Advocacy/Contracting). On the contrary, it appears that a good deal of advocacy intervention occurs naturally and volunteers could only benefit from the increased training incorporated in the Advocacy/Contracting intervention model.

In any case, it is apparent that diverting the youth from formal involvement with the court system (the experimental conditions versus the treatment-as-usual controls) resulted in fewer youth becoming incarcerated. Many would argue that this consideration alone would warrant the preference for either intervention condition. Some of the well documented advantages to avoiding institutionalization are: avoiding the interaction with other offenders in a closed setting (Feldman, Wodarski, Goodman & Flax, 1973), the frequent inability of institutional interventions to impact positively upon the youth's return to the community (Lerman, 1975), the more apparent labeling effects of institutional placement (Empey, 1967), and the overwhelming costs of institutional placement (Palmer, 1974).

In conclusion, the results of this study are encouraging both in terms of the ability to train undergraduate volunteers as nonprofessionals working with

delinquent youth and in terms of providing several worthwhile outcome effects. However, it is apparent that contracting activities focused solely on interventions within the home setting are insufficient to insure the desired outcomes.

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TABLE 1
Police Contacts

Condition	<u>Time Intervals</u>					
	<u>Four Quarters Pre</u>				<u>Two Quarters Post</u>	
	1	2	3	4	5	6
Advocacy/Contracting	.08	.08	.26	1.43	.39	.04
Family Contracting	.12	.12	.46	1.08	.25	.29
Control	.07	.22	.26	.85	.30	.19

Police Contact - Analysis of Variance

<u>Source</u>	<u>Df</u>	<u>MS</u>	<u>F</u>	<u>Prob.</u>
Condition (C)	2	.78	.86	.43
Subjects (S)	71	.91		
Time (T)	5	10.50	21.54	.0005
C x T	10	.49	1.01	.44
S x T	355	.49		

TABLE 2

Proportion of Youth Not in School

Condition	<u>Time Intervals</u>					
	<u>Four Quarters Pre</u>				<u>Two Quarters Post</u>	
	1	2	3	4	5	6
Advocacy/Contracting	.00	.10	.10	.14	.14	.10
Family Contracting	.15	.10	.05	.05	.20	.30
Control	.00	.00	.04	.04	.13	.17

Not in School - Analysis of Variance

<u>Source</u>	<u>Df</u>	<u>MS</u>	<u>F</u>	<u>Prob.</u>
Condition (C)	2	.21	.75	.48
Subjects (S)	62	.28		
Time (T)	5	.21	4.45	.001
C x T	10	.07	1.51	.136
S x T	310	.05		

Figure 1

Average Annual Number of Police Contacts

MEAN POLICE CONTACTS ANNUALLY

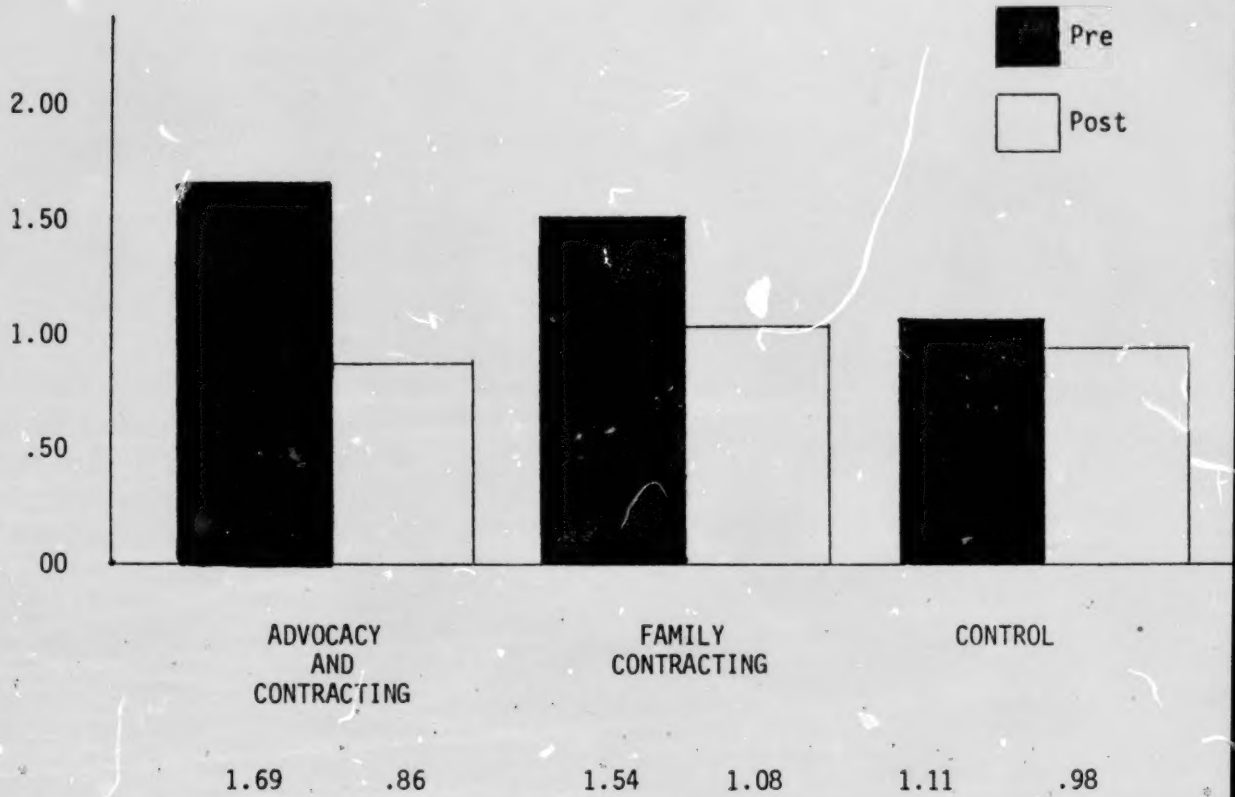


Figure 2
Contracting Intervention

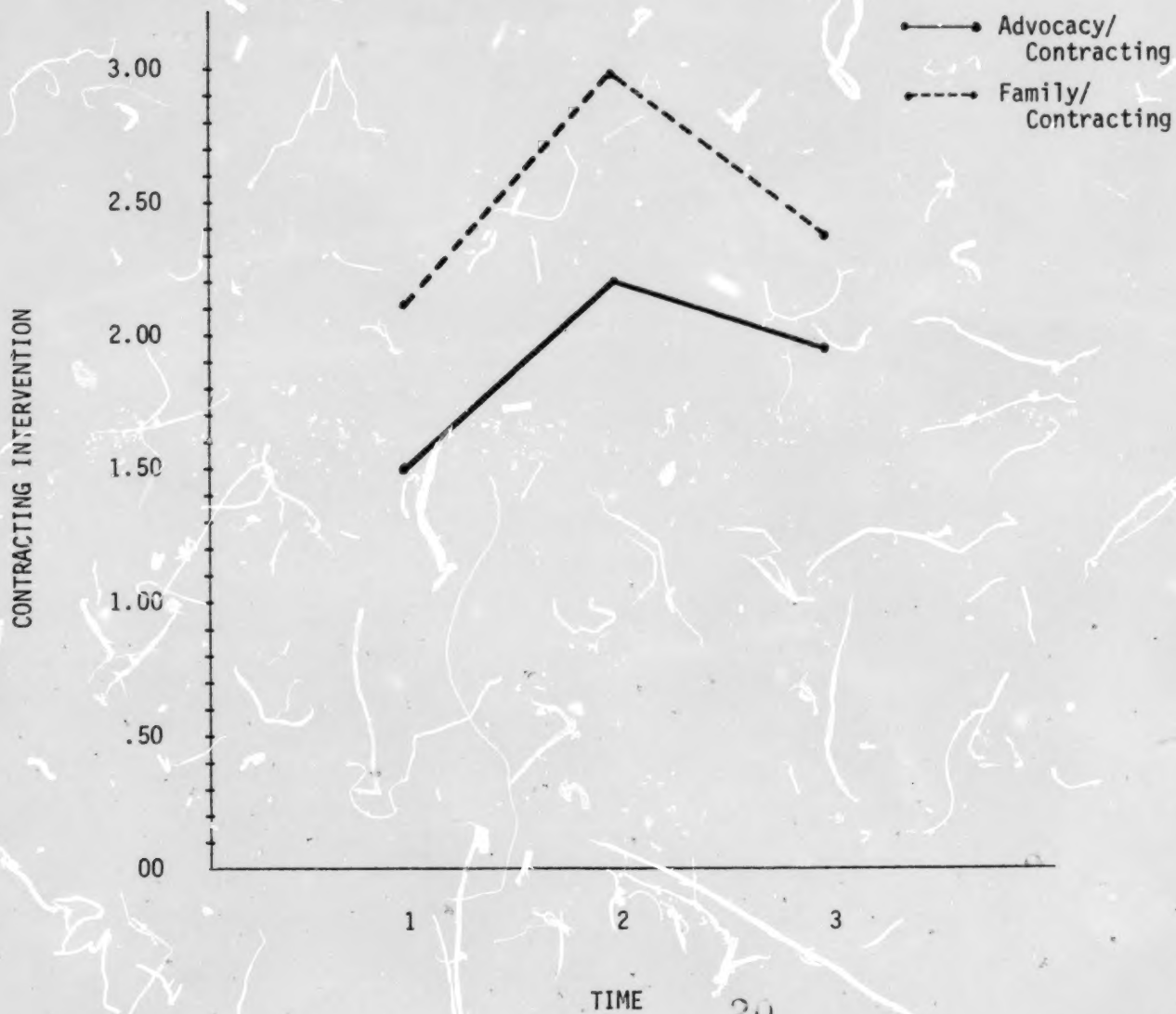


Figure 3

Intervention Focused on Changing
the Youth in the School Setting

